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This is a continuation patent application of Serial Number 09/576,647, filed on May 22, 2000, entitled "PUSH-PULL CONFIGURATIONS FOR SEMICONDUCTOR DEVICE HAVING A PN-JUNCTION WITH A PHOTSENSITIVE REGION," which is a continuation-in-part patent application of Serial Number 09/532,581, filed on March 22, 2000, entitled "SEMICONDUCTOR DEVICE HAVING A PN-JUNCTION WITH A PHOTSENSITIVE REGION," which are incorporated herein by reference.

### In the Claims

A clean version of the entire set of pending claims as amended by this Response is presented on the following page.

Claims 1-12 are canceled.

Claims 13-30 are added.

Clean Version of the Entire Set of Pending Claims

1 13. A device, comprising:  
2 a first sub-device comprising:  
3 a p-doped substrate;  
4 a first n-doped region situated within said p-doped substrate;  
5 a first p-doped region situated within said p-doped substrate;  
6 and  
7 a first photosensitive region situated between said first n-doped  
8 region and said first p-doped region, within said p-substrate; and  
9 a second sub-device comprising:  
10 an n-doped substrate;  
11 a second n-doped region situated within said n-doped  
12 substrate;  
13 a second p-doped region situated within said n-doped  
14 substrate; and  
15 a second photosensitive region situated between said second n-  
16 doped region and said second p-doped region, within said n-substrate,  
17 wherein said first p-doped region is electrically coupled to said second n-  
18 doped region.

1 14. The device of claim 13, wherein said first n-doped region is  
2 electrically coupled to a positive power supply rail.

1 15. The device of claim 14, wherein said first n-doped region is  
2 electrically coupled to said positive power supply rail by way of a first  
3 resistive element.

1           16. The device of claim 13, wherein said second p-doped region is  
2 electrically coupled to a negative power supply rail.

1           17. The device of claim 16, wherein said second p-doped region is  
2 electrically coupled to said negative power supply rail by way of a resistive  
3 element.

1           18. The device of claim 13, wherein said first n-doped region is  
2 electrically coupled to said positive power supply rail by way of a first  
3 resistive element, and said second p-doped region is electrically coupled to  
4 said negative power supply rail by way of a second resistive element.

1           19. The device of claim 13, wherein said first p-doped region and  
2 said second n-doped region are electrically coupled to a ground potential  
3 rail.

1           20. The device of claim 13, further comprising a fiber optic channel  
2 coupled to said first and second photosensitive regions.

1           21. A device, comprising:  
2           a first sub-device comprising:  
3               a p-doped substrate;  
4               a first n-doped region situated within said p-doped substrate;  
5               a first p-doped region situated within said p-doped substrate;  
6           and  
7               a first photosensitive region situated between said first n-doped  
8           region and said first p-doped region, within said p-substrate; and  
9           a second sub-device comprising:

10 an n-doped substrate;  
11 a second n-doped region situated within said n-doped  
12 substrate;  
13 a second p-doped region situated within said n-doped  
14 substrate; and  
15 a second photosensitive region situated between said second n-  
16 doped region and said second p-doped region, within said n-substrate,  
17 wherein said first p-doped region is electrically coupled to said second p-  
18 doped region.

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22. The device of claim 21, wherein said first p-doped region is  
electrically coupled to said second p-doped region by way of a resistive  
element.

23. The device of claim 21, wherein said first n-doped region is  
electrically coupled to said second n-doped region.

24. The device of claim 23, wherein said first n-doped region is  
electrically coupled to said second n-doped region by way of a resistive  
element.

25. The device of claim 21, wherein first p-doped region is  
electrically coupled to said second p-doped region and said first n-doped  
region is electrically coupled to said second n-doped region.

26. The device of claim 25, wherein said first p-doped region is  
electrically coupled to said second p-doped region by way of a first resistive  
element and said first n-doped region is electrically coupled to said second  
n-doped region by way of a second resistive element.

1           27. The device of claim 26, wherein said first p-doped region is  
2 electrically coupled to a ground potential rail, and said second n-doped  
3 region is electrically coupled to a positive power supply rail.

1           28. The device of claim 13, further comprising a fiber optic channel  
coupled to said first and second photosensitive regions.

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1           29. A device, comprising:  
2           a first sub-device comprising:  
3               a first p-doped region;  
4               a first n-doped region; and  
5               a first p-doped photosensitive region to control a first current  
6 flowing from said first n-doped region to said first p-doped region in  
7 response to an optical signal; and  
8           a second sub-device comprising:  
9               a second p-doped region;  
10              a second n-doped region; and  
11              a second n-doped photosensitive region to control a second  
12 current flowing from said n-doped region to said second p-doped region in  
13 response to said optical signal.

1           30. The device of claim 29, further comprising a fiber optic channel  
2 to carry said optical signal, said fiber optic channel being coupled to said  
3 first and second photosensitive regions.